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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/802,538

03/17/2004

Thomas J. Bachinski

77012-325690

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04/20/2006

FAEGRE & BENSON, LLP
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EXAMINER

SUERETH, SARAH ELIZABETH

ART UNIT

PAPER NUMBER

3749

DATE MAILED: 04/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/802,538

Applicant(s)

BACHINSKI ET AL.

Examiner

Sarah Suereth

Art Unit

3749

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 March 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-53 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-53 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 August 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>7/12/04 & 11/26/04</u> | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claims must be numbered consecutively beginning with the number next following the highest numbered claims previously presented (whether entered or not).

Misnumbered claims 53 and 54 have been renumbered 52 and 53.

2. Claims 1-15 are objected to because of the following informalities: the word "characteristic" in line 8 of claim 1 should read -- characteristics --. Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

Claim 51 is rejected under 35 U.S.C. 102(b) as anticipated by Lyons et al 6413079.

Lyons discloses the steps of: providing a first room temperature measurement; setting a target room temperature; generating a flame having a first flame amplitude configured to attain heat sufficient to attain the target room temperature; providing a second room temperature measurement; determining a difference between the target room temperature and the second room temperature measurement; and altering the first flame amplitude to a second flame amplitude when the determined difference is within a predetermined range of the target room temperature (col. 4, lines 14-23).

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-7, 12, 15, 21-29, 31, and 32 are rejected under 35 U.S.C. 102(b) as being anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Shimek et al 5890485.

6. Shimek et al discloses: a heating appliance comprising a combustion chamber (11), a burner (13) positioned to generate a flame inside the combustion chamber (Fig. 1); a variable valve (28) coupled to the burner; a controller (29) coupled to the variable valve, the controller configured to generate a control signal for the variable valve to adjust a flow of combustible fuel delivered to the burner to generate at least one of a plurality of flame characteristics (col. 1, lines 33-36). Shimek also discloses a

Art Unit: 3749

modulated flame (col. 1, lines 47-50) having a modulation frequency (col. 3, lines 36-40), adjustable through an input device (48).

7. Regarding at least claim 1, all flames inherently and necessarily have flame characteristics.

8. Regarding at least claim 3, all flames inherently and necessarily have an absolute temperature.

9. Regarding at least claims 22 and 32, all flames inherently and necessarily have an absolute amplitude.

10. Regarding at least claims 4 and 23, all flames inherently and necessarily have a mean temperature.

11. Shimek also discloses a device for measuring flame temperature (37), and a sensor (36), which communicates with the control valve to adjust the gas flow (Figure 4).

12. Regarding at least claims 5-7 and 24-26, the Shimek apparatus is capable of performing the functions of keeping the flame temperature constant, increasing the flame temperature, or decreasing the flame temperature by regulating gas flow (col. 1, lines 38- 40), in the same manner disclosed by applicant.

Regarding claim 12, the valve includes a solenoid (29) to regulate pressure (col. 2, lines 36-39).

Claims 1, 8-11, 15, 21, 30, 40-46 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Whitaker et al 5450841.

Whitaker discloses: a combustion chamber (10), a burner (col. 4, line 67) positioned to generate a flame inside the combustion chamber; a variable valve (22) coupled to the burner; a controller (34) coupled to the variable valve, the controller configured to generate a control signal for the variable valve to adjust a flow of combustible fuel delivered to the burner to generate at least one of a plurality of flame characteristics (col. 3, lines 44-47) and an input device (38) coupled to the controller for selecting one of the plurality of flame characteristics.

Regarding claim 8, the controller is configured to provide at least two control signals, each relating to a different flame characteristic (col. 1, lines 42-46).

Regarding claim 9, the volume of gas and the blower speed are controllable (col. 1, lines 42-46), resulting in the ability to change the modulation frequencies.

Regarding claim 11, Figure 1 shows the input device (38) having a display screen and input selectors (40).

Regarding claim 10, Whitaker discloses a controller consisting of a microprocessor in communication with a decoder (Figure 1), but does not explicitly state that memory is built into the assembly. However, the High Tech Dictionary (<http://www.computeruser.com/resources/dictionary/definition.html?lookup=499>, Accessed on 4/12/06 at 2:30 PM) defines a decoder as: used to enable a computer to recognize instructions and addresses.

Art Unit: 3749

The Whitaker microprocessor is programmable (col. 3, line 44), and the processor uses algorithm inputs stored in the memory to generate a signal (col. 3, lines 47-49). The microprocessor must necessarily have memory in order to be programmable and to carry out the instructions accordingly.

Regarding claim 15, the Whitaker apparatus varies the gas flow in order to adjust the flame height (col. 2, lines 1-3).

13. Regarding at least claim 40, all flames inherently and necessarily have flame characteristics.

Regarding claims 40 and 41, the Whitaker apparatus performs the steps of the method.

Regarding claim 42, the controller can be used to lower the flame height (col. 2, lines 1-3), which is read as the equivalent of applicant's flame burn mode.

Regarding claims 43 and 44, the modulating flame must necessarily have a flame frequency, an absolute amplitude, and a mean flame amplitude.

Regarding claim 45, the apparatus has a control to vary the gas flow and adjust the flame height (col. 2, lines 1-3).

Regarding claim 46, a data input corresponding to at least one flame effect is entered into an algorithm and a control output is calculated (col. 1, lines 46-48).

14. Claims 13, 14, 16-20, 33 and 37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimek, as applied to the claims above, in view of Smith 6314191.

Art Unit: 3749

Shimek, as discussed above, discloses the limitations of the claimed invention with the exceptions of a sound system and a scent dispensing system.

Smith discloses a sound system (18) and scent dispensing system (22) for usage in gas fireplaces. The sound system and scent dispensing system are controlled by a infrared detector (44), so that they operate only when the fire is lit (col. 4, lines 15-18).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Shimek with the sound system and scent dispensing system of Smith in order to make the fireplace more appealing to the user by simulating nature (col. 1, lines 52-54).

Claims 33, 35-39, 49, 50, 52, and 53 are rejected under 35 U.S.C. 103(a) as being unpatentable over Whitaker et al, as applied to the claims above, in view of Smith.

Whitaker, as discussed above, discloses the limitations of the claimed invention with the exceptions of a sound system and a scent dispensing system. Additionally, Whitaker discloses a blower (30).

Smith discloses a sound system (18) and scent dispensing system (22) for usage in gas fireplaces. The sound system and scent dispensing system are signaled by an infrared detector (44), so that they operate only when the fire is lit (col. 4, lines 15-18).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Whitaker with the sound system and scent dispensing system of Smith in order to make the fireplace more appealing to the user by simulating nature (col. 1, lines 52-54).

Regarding claim 50, Whitaker discloses that other features could additionally be controlled in a similar manner as the disclosed features (col. 4, lines 49-52). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Whitaker apparatus with a sound system and scent dispensing system, which would necessarily be synchronized by the controller.

Regarding claims 49, 50, 52, and 53, the Whitaker in view of Smith apparatus performs the steps of the method.

Claim 34 is rejected under 35 U.S.C. 103(a) as being unpatentable over Whitaker et al in view of Smith as applied to claim 33 above, and further in view of Hess 6385881.

15. The Whitaker/Smith combination as discussed above includes the claimed limitations with the exception of a lighting control.

16. Hess discloses a lighting control for a gas fireplace wherein a signal is generated by the control system to adjust the backlighting (col. 3, lines 4-6).

17. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Whitaker/Smith combination with the lighting control of Hess in order to realistically simulate the ambient light changes associated with the flickering of flames in fireplace (col. 1, lines 26-28).

Claims 47 and 48 are rejected under 35 U.S.C. 103(a) as being unpatentable over Whitaker et al in view of Bechade et al 6415008.

Whitaker et al discloses the claimed limitations with the exception of a signal multiplier.

Bechade discloses a signal multiplier (Figure 1), which is taught to synchronize the delay and input signal so that the phase can be monitored (col. 2, lines 35-38).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the invention of Whitaker with the signal multiplier of Bechade in order to better control the modulation frequency of the flame (col. 2, lines 35-38).

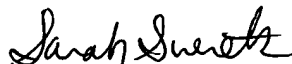
Conclusion

Regarding pertinent prior art, applicant's disclosure has a comprehensive list of existing prior art. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sarah Suereth whose telephone number is (571) 272-9061. The examiner can normally be reached on Monday to Thursday 7:00AM-4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ehud Gartenberg can be reached on (571) 272-4828. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3749

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Sarah Suereth
Examiner
Art Unit 3749


JOSIAH C. COCKS
PRIMARY EXAMINER